SUMMARY

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Three score and five hours ago we met together for the first time, more or less strangers to each other. Since that time we have talked, gossiped, mildly flirted, consumed 2,000 cups of coffee, walked through the lovely gardens, and before dinner have enjoyed a drink together. Out of this has come group identification that is at once transitory and durable. Memory of specific things will be fleeting but the enrichment that is the residue of the experience will be long lasting.

We have been engaged in an educational enterprise. Education has a dynamic and organic quality which means that what happens is more or less unpredictable. We can make some guesses and have some hopes as to what will transpire here but we can never be sure as to precisely what will happen. So in a way summaries are devised to look back and see what the dimension and the character of the educational experience has been.

Looking back over the past three days it seems to me that we have learned anew, or had confirmed, certain facts and notions. The first of these is that scientific knowledge is rapidly expanding, and that each new discovery opens up ever wider paths of discovery. We might call this Sietz's Law of the Inevitability of Scientific Expansion. What is to come in the future is unforeseeable, but that it is coming is inevitable. Meanwhile, along with scientific knowledge, scientific information is increasing at the same pace and in the same way. We also had confirmed the belief that science is actually impossible without printed records for scientific knowledge is cumulative, building on what has gone before.

During the past three days we were reminded again of the great and marvelously exciting pageant of western culture,

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whereby we have been brought by cumulative steps to our present state of development. We took a retrospective glance over the great, undying landmark books through which scientific knowledge has accumulated bit by bit. While not all of them are suitable for the general reader of today several are as stimulating and instructive now as when they first burst into man's consciousness.

A look at modern scientific publishing showed how vast and disorderly, how complex and expensive this process is. We had a number of statistics given to us but I was particularly struck by one from Mr. Shipman--next year 2 1/4 million articles will appear, on 11 billion pages, in a fantastic number of journals, and in more than twenty languages. We also learned that Russia has emerged as one of the principle producers of scientific information, at least equal, and in some instances, surpassing the United States.

Then we considered who uses or wants to use this scientific information. First, we know, there is the scientist himself, but this group has been outside the context of our meeting. Our concern was with the so-called general reader defined as the person of good intelligence and developed reading interests and skills who does not have specific training in, in this case, science or technology. As we looked at the general reader a little more carefully we discovered that actually age does not have a great deal to do with reader interest in science. The child, the teenager, the young adult, and the adult may differ slightly in their immediate motivation and their reading level, but their interests are basically the same. We learned too that the general reader is apparently not interested in theoretical science, as such. Indeed we had confirmed some of our suspicions that people are a little fearful of Science, experiencing those apprehensions which may be the basis of superstition--the fear of the mysteriously unknown. On the other hand nearly all people are concerned, sometime, with some phenomenon of life or the world about us, and it is this which leads to an interest in science. Such mundane matters as constipation, the stars, why eyes are blue, animal pets, what a goldfish eats, and how to identify a bird, rock, or a tree are questions which arouse our curiosity at some stage in life. Knowledge about such matters we know comes from science, and the answers are are found in science.

There are others who wish to know about or to see a little more clearly what is happening as the scientist achieves ever greater mastery over our environment. Readers of this kind are genuinely interested in the latest findings in oceanog-

raphy, or nuclear physics, or aerodynamics. Unable to study the matter himself such a reader still has the curiosity, the interest, and the desire to know what progress has been made, how much has been learned. These people, however, cannot hope to comprehend the detailed technical language of reports and papers. Therefore they must turn to the popularizer, so called, who plays an increasingly important role in the interpretation and the reporting of scientific information.

Finally, there is a growing body of thoughtful readers concerned with one of the truly disturbing questions of our time --how do we bring our religious beliefs into adjustment with scientific findings. It is often that these two are seemingly incompatible. Scientists themselves as well as humanists, psychologists, theologians, and philosophers are earnestly reflecting upon this fundamental human problem. The result is an extensive literature, an integral part of the scientific corpus.

During the conference sharp attention was paid to information sources. We learned about the efforts that are being made to improve the quality of science reporting and the methods for the dissemination of scientific information. We reviewed the broad range of informational materials that are available for the reporting of science from books at one end to, in one speaker's word, the realia at the other. We examined their characteristics, their dimensions, and their usefulness under particular circumstances. The demonstrations of some of the newer uses of audio-visual materials as the means of reporting science were especially exciting in their possibilities. All of it lead to the inevitable conclusion that the average library is going to have to buy more, and to have more difficult selection problems of acquisition in respect to, science materials.

At this stage in the proceedings we took a look at the really basic problem of our conference--how can we develop effective methods of selection of these new materials. Someone mentioned Shipman's Doctrine of Unintelligibility as one of the major revelations of this institute. Certainly his doctrine was comforting to all of us in its implication that is is not necessary to understand the material in science ourselves in order to be able to select it for our readers. Even scientists, apparently, do not always understand each other.

Building a collection of science materials does not call for special skills. Here as in other subject areas we need only to apply the basic principles of selection that are customarily used in our professional work, identifying the needs and requirements of the community, establishing the purposes of the particular library, and upon these constructing a method of selection.

A singularly useful approach was suggested in Bonn's Six Decision Method of Selection. This calls for decisions to be made on six questions: a) what has been published, b) which of the things that have been published are available, c) which of those available are worth-while, d) which of those that are worth-while are most suitable, e) which of those most suitable are best for our specific library, and f) which of those that are best for our specific library should be purchased out of a limited budget. These are essential decisions and are the basis of any discriminating selection procedure.

There seems little question in view of the Shipman Doctrine that librarians must rely on other people for help in the selection of science material. Use of subject experts,of course, for long has been an accepted procedure but it was underscored that its usefulness increases in direct proportion to any librarian's specific familiarity with and ability to evaluate material in science. Members of local scientific societies are the kind of knowledgeable people in the community whose advice on the selection of books can be exceedingly valuable.

Another way to get the advice of experts is through the reviewing media and we had a most interesting discussion, and presentation of the characteristics, of the reviewing media in the science field. It is clear that these media are general reliable and that it is likely that they will get more so as the years go on. While they will also increase in number there undoubtedly will be amalgamation, reorganization, and reorienting of these reviewing periodicals as the years proceed.

Expert's reviews are especially useful in making gross elimination of the items that are poor or are of such a nature as to be undesirable for use in a library. Discussion also brought out that the various reviewing journals can be used effectively only with practice. An exposure meter in photography gives a foot-candle reading but the photographer must interpret what the reading means as far as his particular camera, the particular light situation, and the particular film is concerned; something of the same applies in using reviewing media.

Now to sum up the summary, during the past three days it was conclusively established that, more and more, books in science will be added to all library collections. This is definite, clear, and no longer the occasion for speculation. Science is here to stay and its bibliography will increase apace.

Librarians must face up to the fact that the addition of science materials is going to cost money. One of the obligations that we have to our users is proving to those who control library finances that more money will be needed to round out any

library's collections with the inclusion of scientific materials. The answer is not, even temporarily, in lowering or changing selection policies in the non-scientific areas. Science material by its very nature is expensive and this is going to have to be realized by all of those who are concerned with the support of our libraries. Librarians will need to drive this point home to those upon whom they rely for support.

It was no small comfort to discover that the same principles of selection apply to science as apply to any other subject field; that it is not something we are going to have to do differently. The principles are precisely the same, only the interpretation of them slightly different.

Most librarians, there can be little doubt, must rely on reviewing aids to a considerably greater extent in selecting science books than for almost any other subject. They must make a definite effort to know what their media are and how to use them effectively. A long step toward learning about them was made during this institute but that was only the beginning. The most important thing learned here is that the reviewing periodicals in science can be relied upon for accuracy, currency, and authority.

Finally, the paramount and permanent change that this meeting may have brought about in each of us is the contribution it gave toward the development of a new outlook and a new philosophy: science belongs in every library. There has been on the part of all too many a feeling that maybe science, especially as addressed to the general reader, was not really needed in the public library or the college library or university library. But that ghost, it seems to me, has been well disposed of. Furthermore, librarians will need, in the immediate years ahead, to inform themselves as never before about the world of science. In that connection the real words of wisdom came from the youngster described by one of the speakers: "Lady, if you're going to learn something about science, you gotta like snakes."